GSBS Office of Career Development

Career Connections

A monthly newsletter highlighting career & funding opportunities

This month's featured fellow has received two major fellowships.

Julianna Quinn

4th Year, Genetics and Epigenetics Program

1. Ruth L. Kirschstein Predoctoral Individual National Research Service Award (F31, PA-25-422)

Title: "*Investigating the Role of Hippo Signaling in Sinoatrial Node Development*"

Opportunity Details: The NIH F31 enables promising predoctoral students to obtain individualized mentored research training from faculty sponsors while conducting biomedical research.

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2. American Heart Association (AHA) Predoctoral Fellowship

Title: *"Investigating Hippo Signaling in Sinoatrial Node Development"*

Opportunity Details: The AHA Predoctoral Fellowship enhances research training of promising predoctoral students who intend careers as scientists, physician-scientists, or related careers aimed at improving global cardiovascular, cerebrovascular and brain health.

Discovering a Passion for Cardiovascular Health

When Julianna Quinn first started her PhD, she had a strong interest in biological sciences and experience with the mechanisms driving the development of embryos. She wanted to broaden her scientific perspective, so she chose to explore new research areas. During her rotations, she discovered the lab of Jun Wang, PhD, which focuses on cardiac development and diseases. Now, Quinn studies the mechanisms underlying cardiovascular disease, the leading cause of death worldwide. She focuses on the sinoatrial node (SAN), known as the heart's natural pacemaker. The SAN generates the initial electrical impulse that triggers heartbeats. Improper SAN function can lead to irregular heartbeats, known as arrhythmias, and even sudden death. While arrhythmias are one of the leading causes of heart-related deaths, the SAN is one of the least understood components of the heart. Motivated by her relative's struggles with heart conditions, including her grandmother, Quinn is dedicated to understanding the development of the SAN through signaling from the Hippo pathway in cardiac cells. She hopes her work will shed new light on cardiac development, leading to novel new therapy options for individuals with cardiovascular disease.

> *"The combination of high disease prevalence, limited therapeutic options, and the gaps in our understanding [of cardiovascular disease mechanisms] strongly motivated me to pursue research in cardiovascular biology."*

The Path to Fellowship Success: Start Early, Write Often, Share Your Science

When Quinn first began her graduate school career, she assumed she wouldn't be ready to apply for fellowships until after her candidacy exam. Instead, her mentor, Dr. Wang, insisted that crafting her applications would be an essential exercise in understanding her project and ensuring her success. She worked diligently with her mentor and the Graduate School's Career Development Office to navigate the preparation of her applications.

> *"I encourage any student considering a fellowship to have early conversations with their mentor and outline a clear plan before getting started. Having a roadmap makes the process far more manageable and sets you up for success."*

Clear communication was one of the keys to her success. She treated development of her applications much like studying for candidacy by creating schedules, goals, and tasks. She acknowledges that writing can be difficult for her. She writes best in the morning and structured her experiments and time in the lab to allow herself that productive time to develop her application. By breaking down her fellowship application into manageable pieces, she ensured she stayed on schedule to prepare for candidacy and submit applications to both the AHA and the NIH.

"I created a structured plan that aligned with how I work best, helping me stay organized, manage my time effectively, and break the workload into achievable tasks all aimed at the same goal."

When asked about the most important piece of advice she would give to fellowship applicants, Quinn stressed the importance of feedback and tailoring your application to reviewers. While she worked with the Graduate School and her mentor on the practical parts of creating her application, she solicited feedback on her science and training plan components from a wide variety of peers and scientists involved in her research. She encourages having people both in your field and in adjacent fields give critical and constructive feedback.

"You'd be surprised how often something that seems clear when you write it turns out to be confusing to someone unfamiliar with your specific area of research, even if they work in the same broad field."

While her project approach was similar for both applications, the format and required documents differed between the AHA and NIH. She noted differences in review criteria and feedback categories between the two agencies, and ensured her applications were customized to those requirements. Quinn also notes that your selection of study section can significantly impact your fellowship's score and feedback. Getting feedback from mentors and other trusted advisors will ensure your fellowship application ends up in the most qualified hands for review.

Quinn's openness to feedback and diligent approach to each application clearly paid off. She received both nationally competitive fellowships. She first received her AHA Predoctoral Fellowship Award to fund two years of her doctoral research and was thrilled to then receive notice of an NIH F31. Quinn relinquished her AHA fellowship early to ensure that she could activate her NIH award, which covers the remainder of her graduate research.

Collaborative Spirit of UTHealth Houston and the Texas Medical Center Keys to Research Success

Fueling both her willingness to receive feedback and her research success is the collaborative environment in the Wang lab and the Texas Medical Center. Quinn notes that her lab not only collaborates with others in the department at UTHealth Houston but also with other Texas Medical Center institutions. These collaborations have allowed her to explore new areas of cardiac research and connect with experts across multiple fields. From learning new techniques to providing critical data to projects in other labs, Quinn has a deep understanding of the need for cross-disciplinary and collaborative science. She also notes that highlighting these opportunities to enhance her research training was reviewed

as a strength of her applications. She leans into opportunities to work with the many experts in cardiac health found right here in Houston.

> *"Entering a new specialized field can feel intimidating [...] However, being in a room with experts, learning how they approach discoveries, hearing insights from their projects, and exchanging ideas has been invaluable to my research."*

By actively participating in these initiatives, she has built a network of researchers who will continue to mentor and support her through graduate school and beyond. She hopes to continue her work in developing innovative research strategies to tackle cardiac health as an industry or academic scientist after she completes her PhD.

Quinn (back right) poses for a photo with the Wang lab.